

Motion Trajectory Based Human Hand Tracking for Sign Language Recognition

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Abstract: Sign Language is the only formal way of communication for the mute persons and the hearing impaired. Developed systems that can recognize these signs provide an interface between signers and non-signers by which the meaning of sign can be interpreted. The aim of this project work was to design a user independent framework for automatic recognition of Sign which can recognize various one handed dynamic isolated sign and interpreting their meaning. The proposed approach consists majorly of three steps: preprocessing, feature extraction and recognition. We proposed system which we have compared different approaches of image processing for Motion trajectory based human hand tracking for sign language recognition.

Keywords: Preprocessing, Feature Extraction, Recognition, Trajectory, CNN.

BIBLIOGRAPHY

- [1]. Dr. Anand Singh Jalal "Automatic Recognition of Dynamic Isolated Sign in Video for Indian Sign Language" In (2013-14)
- [2]. Rajesh George Rajan 2.M Judith Leo. "A Comprehensive Analysis on Sign Language Recognition System" In IEEE Conference, 2019
- [3]. Joyeeta Singha 2.Karen Das "Hand Gesture Recognition Based on Karhunen-Loeve Transform"
- [4]. Kalin Stefanov 2.Jonas Beskow "A Real-time Gesture Recognition System for Isolated Swedish Sign Language Signs" In (2016)
- [5]. Gerald Krell 2.Bernd Michaelis "Gesture Recognition for Alphabets from Hand Motion Trajectory Using Hidden Markov Models"
- [6]. Iker Vazquez Lopez "[] Hand gesture recognition or sign language transcription."
- [7]. Paulo Trigueiros 2. Fernando Ribeiro "Vision-based Portuguese Sign Language Recognition System"
- [8]. Bhumika Nandwana 2. Satyanarayan Tazi 3. Santosh kumar "A Survey Paper on Hand Gesture Recognition"
- [9]. Dinh-Son Tran, 2. Hyung-Jeong Yang "Real-Time Hand Gesture Spotting and Recognition Using RGB-D Camera and 3D Convolutional Neural Network (2020)"